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GOVERNMENT OF ODISHA

ENERGY DEPARTMENT

RESOLUTION

The 28th July 2025

SUBJECT—Odisha Pumped Storage Projects (PSP) Policy

1. Preamble :

Pumped Storage hydro Projects (PSP) have emerged as an important component of Energy Transition as they offer numerous benefits by storing excess energy during low-demand periods and supplying it back during peak-demand periods or when availability of renewables is low. As of now, they offer the most economical technology to provide long-duration storage support for addressing the intermittency caused by increasing share of renewable energy in the grid by providing reliable grid-scale energy storage. Additionally, pumped storage projects can also provide grid stability and reliability services by providing instantaneous response to load changes, provide black start, spinning reserves, frequency response and other ancillary services.

The Odisha Renewable Energy Policy, 2022 (OREP-22) was notified in November 2022 vide Resolution No. 11757-ENG-HYD-HYDRO-0009/2022-En., dated the 30th November 2022 with an aim to create a conducive ecosystem for development of renewable energy projects in the State. While the said policy covers PSPs, there have been some further developments around PSP including the issuance of guidelines for development of PSP by the Central Government. [F. No. 15-14/9/2022-H-II (Part), dated the 10th April 2023 of Ministry of Power, Government of India].

This Policy takes these developments into cognizance and supplements the OREP-22 to Promote development of PSPs in the State through participation of private sector., Government, State and Central PSUs. This policy shall be read in conjunction with Odisha Renewable Energy Policy, 2022.

2. Title and Objective :

This policy would be known as “Odisha Pumped Storage Projects (PSP) Policy 2025”

The objective of the policy is to promote development of pumped storage hydro projects within the State and facilitate smooth integration of renewable energy in the grid.

This Policy shall be applicable for allotment of State-identified PSPs and off-the-river Self-identified PSPs, for procurement by GRIDCO/ DISCOMs/ SLDC/ captive consumption by industries and/or for sale through Open Access or for any such purposes as may be required for RE development in the State.

3. Applicability of provisions of Odisha Renewable Energy Policy 2022 :

All PSP projects shall primarily be guide by this Odisha Pumped Storage Projects (PSP) Policy, 2025. With notification of this Policy the Clause No. 13 of the OREP 2022 stands withdrawn. This Policy is supplementary to the Odisha Renewable Energy Policy, 2022, shall be read in conjunction with that policy and shall be coterminous with the Odisha Revewable Energy Policy, 2022.

4. State Identified Projects :

4.1 Allocation of Projects :—

The Nodal Agency/ SPSUs of the State Government have identified 45 numbers of potential PSP sites, which are already published in the web portal of the Nodal Agency. Such PSP sites shall be considered as State-identified sites. Further, the Nodal Agency /SPSUs/CPSUs/any other entitly of the State Government shall continue to identify feasible sites, conduct pre-feasibility studies and register the project/sites as identified projects on an ongoing basis. All State-identified projects shall be allocated through the following route :—

A. On nomination basis/ MoU route to CPSUs or SPSUs or JV thereof after due consideration of technical and financial capabilities to execute the projects. Procurement of power by GRIDCO/ DISCOMs from such projects shall be guided by the prevailing Regulations; or

B. Through a competitive bidding process where bids shall be invited on the basis of revenue shared/unit of net energy sent out or any other parameter as decided by Nodal Agency subject to a threshold as decided by it; or

C. Through a Tariff Based Competitive Bidding (TBCB) mechanism based on a composite tariff where input power is arranged by the developer or a tariff for storage on MWh basis where the input power is arranged by the procurer of the storage.

4.2 Bidding Criteria for Competitive Bidding of State-Identified Projects :—

Unless a project is awarded on nomination basis, the Nodal Agency or any other bid process co-ordinator nominated by the Nodal Agency shall undertake a transparent competitive bidding process for selecting the developer to develop the State-identified projects. All private developers/ SPSUs/ CPSUs either on their own or through a JV may participate in the bidding process, subject to meeting the qualification criteria that may be mentioned in the RfP/RfQ. Where bids are not invited under TBCB mechanism, bids shall be invited for revenue shared/unit of net energy sent out or Viability Gap Funding (VGF) required or any other parameter as decided by the Nodal Agency, subject to a minimum or maximum threshold as decided by the Nodal Agency beyond which the bid will be rejected. The projects shall be eligible for VGF or any financial support from the Central Government and/or State Government as per the policy decision of the Government . However, no VGF from the State Government shall be made available to projects set up for captive consumption/ third party sale.

5. Self-Identified Off-Stream Projects :

5.1 Criteria for allocation :—

There are several potential sites for developing off-the-river closed loop PSPs in the State which are yet to be identified or surveyed by the State or central agencies. With the increasing role of long duration storage in energy transition, private developers have been approaching the State for allocation of PSP sites. Therefore, it is decided to allocate some of these sites to developers while also keeping the State's interest in view. Private developers may, on their own, identify suitable sites for off-stream PSPs which are not already registered as State identified projects by the Nodal Agency for development of off-stream PSPs in the State. The Nodal Agency shall notify the date of opening of the window for receiving applications for registration of Self-Identified off-stream PSPs from all developers after one (1) month from publication of the Operational Guidelines. Such window shall be opened for a duration of three (3) weeks. The Nodal Agency, may with the approval of the Government, extend the timeline for submission of application on the request of developer(s). Self-Identified off-stream PSP sites identified by any developer will be registered in the name of the developer, post assessment of financial and technical capabilities of the developers and evaluation of technical specifications of the project by the Nodal Agency.

In case of a single developer, the site shall be registered after due diligence. The developer shall share the revenue from the energy sent-out of the Self-Identified Off-the-river Pumped Storage Project. The initial revenue share shall be 10 paisa per unit with an escalation of 10% once in every five (5) years. The State Government reserves the right to revise the revenue share as well as the annual escalation rate. Any delay in payment by the developer shall attract penalty and/ or other suitable adverse actions against the developer as deemed appropriate.

In case multiple developers apply for the same project site, then competitive bidding will be conducted. In this case, revenue share on sent-out energy (kWh) will serve as the basis for selection of successful bidder for registration. The base revenue share for competitive bidding shall be 10 paisa/unit with an escalation of 10% once in every five (5) years. the State Government reserves the right to revise the minimum quantum of the revenue share as well as the anuual escalation rate for competitive bidding. The State through Nodal Agency shall, if required, exercise the right of first refusal (RoFR) of up to 50% of the capacity for State consumption before the competitive bidding as per provisions mentioned in this Policy.

CPSUs/ SPSUs will also be allowed to Self-identify off-stream PSPs and develop in the same manner as private sector developers. Efforts would be made to identify and develop exhausted mines as prospective PSP sites in consultation with Ministry of Coal and Ministry of Mines and State Government.

5.2 Detailed methodology for application and allocation :—

For uniform approach and single window processing, the Nodal Agency shall process all the proposals including captive PSP proposals. In cases of composite industrial investment proposal involving development of self-identified off stream closed loop PSPs along with the industry, the composite application shall be submitted to IPICOL/ Industries Department which shall then forward the captive PSP related proposal to RE Nodal Agency for processing.

Developers, including captive consumers shall apply for registration of Self-Identified Off-the-river Pumped Storage Projects with the Nodal Agency as per requirements mentioned in

the RE portal. The application shall be accompanied with a Pre-Feasibility Report (PFR) and a non-refundable one-time registration fees of INR 10,000/MW (subject to a maximum of INR 1 Crore per project). Among other details, the pre-feasibility report shall cover at least the following details/ documents :—

(a) Geographical maps, layouts and pictures of the location

(b) Availability of upper and lower reservoirs with geographical co-ordinates

(c) Land area required with details such as Revenue/ Forest/ Private

(d) Storage capacity of reservoirs

(e) Full Reservoir Level (FRL) of the available reservoirs

(f) Minimum Drawdown Level (MDDL) of available reservoirs

(g) Requirement of water for initial filling and annual refilling along with planned source of water.

(h) Gross head available at site

(i) Length to Height (L/H) Ratio of the sites

(j) Total Estimated potential of PSP-Hydro with MW capacity with the Power to Energy Ratio (MW to MWh in hrs).

(k) Capacity of the reservoir required to be constructed, if any

(l) District-Tehsil-Taluka-Village name in which the site is located

(m) Status of approach raods

(n) Geological co-ordinates of existing transmission network substation and GSS with distance from site.

(o) Details of interference with wildlife sanctuary/ national park or any other restricted area.

The Nodal Agency shall undertake due diligence of the application including review of preliminary feasibility report, interference Check with State Identified Projects, conflict check with other applications, water availability, financial and technical capability assessment etc. before registration of PSP sites. If multiple bidders apply for the same project site, competitive bidding will be conducted, with the selection of the successful bidder for registration based on the revenue share on sent-out energy (kWh), where the minimum revenue share is set at 10 paisa per unit an escalation of 10% once in every five (5) years. The State Government reserves the right to revise the minimum quantum of the revenue share as well as the annual escalation rate for competitive bidding. The Nodal Agency, after it is satisfied with the conditionalities mentioned above, shall propose for placement of the application before the Single Window Committee (SWC), for according 'Permission to Proceed'.

Once the application is approved through the SWC mechanism, the site will be registered with suitable changes and conditions, if applicable the developer shall submit a Performance Guarantee of INR 2,00,000/ MW with initial validity of 2 years before initial allocation. The Performance Guarantee shall be in the form of Bank Guarantee (BG)/ any other Instrument as notified by the State Government and shall be extended before expiry till signing of Implementation Agreement. In case the Performance Guarantee is not extended before 2 months of its expiry, it shall be encashed by Nodal Agency. Initial allocation of PSP site shall be valid for a period of

2 years, unless granted extension by the Nodal Agency of a case-to-case basis. Ordinarily such extension shall not be granted, unless the delay is due to pending Environmental Clearance (EC). Forest Clearance (FC) and land acquisition, water allocation etc. and Force Majeure conditions, which are not attributable to the Developer. Within this period, the developer must secure all clearances from all authorities including Techno Economic Concurrence (TEC) of DPR from the CEA. This is required before the final allotment of the PSP. The developer must appraise the developments with respect to DPR and clearances of the registered PSP site to the Nodal Agency on a quarterly basis. The Nodal Agency, under guidance of SWC, reserves right to take appropriate action or cancel initial allocation of the site, based on the quarterly appraisal reports, if it is found that the developer has slipped substantially on the timelines. Failure of the project developer in obtaining TEC after initial allocation of project within the timeline (including approved extensions) shall result in termination of the initial allocation and the Performance Guarantee shall be encashed.

After receipt of all clearances, the final allocation of project site shall be made by the Nodal Agency after approval of the Project Approval Committee (Para. 25.5 of OREP-22)/ Committee established under Odisha (Industries) Facilitation Act, 2004. An Implementation Agreement shall be signed between the developer and the Nodal Agency covering all the milestones of project develoment, within one month of final allocation of PSP site. The developer shall be required to submit a Performance Guarantee of INR 4,00,000/ MW with initial validity of 2 years to the Nodal Agency before signing of Implementation Agreement. The Performance Guarantee shall be in the form of Bank Guarantee (BG), or any other Instrument recognized by the State Government and notified by the Nodal Agency. The Performance Guarantee must be extended prior to expiry and maintained till commissioning of the project. If the Performance Guarantee is not extended before 2 months of expiry, it shall be encashed by Nodal Agency. Construction of the project must adhere to the milestones mentioned in the Implementation Agreement, failing which the project allotment is liable to be cancelled, unless otherwise extension is granted by the Nodal Agency on case-to-case basis. Ordinarily such extension shall not be granted unless the delay not attributed to the developer. The Performance Guarantee shall be encashed by the Nodal Agency in case project milestones are not met and the developer could also be blacklisted.

6. Sale of Power :

For the State-identified projects from which GRIDCO decides to procure the entire saleable power/ entire capacity, the tariff shall be determined by OERC or CERC (as appropriate), unless the project is awarded through TBCB. The intent of GRIDCO whether to procure the entire saleable power of the project would be notified at the time of allocation.

GRIDCO may also decide to procure entire power from any State identified project by following TBCB mechanism.

Where a project is awarded on nomination basis to CPSUs/SPSUs/JVs thereof or allotted through competitive bidding (other than TBCB), the State shall have the right of first refusal up to 80% of the project capacity. Tariff shall be fixed by OERC or CERC (as appropriate) under Section 62 of the Electricity Act, 2003.

For self-identified projects, the State shall have the right of first refusal up to 50% of the project capacity. Tariff shall be fixed by OERC or CERC (as appropriate) under Section 62 of the Electricity Act, 2003. The developer can utilise the remaining power/capacity for meeting its captive needs or third-party sale.

GRIDCO may also conduct TBCB for procurement of capacity from State-identified or Self-identified PSP projects already awarded under this policy. Developers can bid from their spare capacities available.

GRIDCO shall be offered 80% of the power generated during monsoon period (June to September) at secondary energy rate determined by CERC/ OERC as applicable, when PSPs operate as conventional hydro. Developer shall sell remaining power during such period to cover the O&M expenses. Such power supplied to GRIDCO by the captive PSPs shall be treated as deemed Consumption of CGPs for enabling the plants to maintain their CGP status.

It is necessary to optimally utilise PSP infrastructure. When the contracted capacity is not being fully utilized by the contracting agency, the developer can transfer usage of the capacity to any other interested entity(ies) so that resources do not remain idle. The gains made in case of transfer of usage of capacity of non-captive PSPs shall be shared in 50:50 ratio.

This provision of transfer shall not be applicable for captive PSPs. However, such idle capacity may be offered to GRIDCO at a tariff determined by OERC/ CERC as applicable.

7. Incentives :

All incentives mentioned in OREP-22 shall be available. The following additional incentives shall also be applicable :

1. PSPs shall be exempted from payment of Electricity Duty and Cross Subsidy Surcharge on input energy irrespective of the location of source of input energy.
2. Since water used in PSPs is for non-consumptive purpose, no water cess shall be levied on PSPs for either for filing water for first time or annual refilling of requisite volume of water to be allocated by the Water Resources Department. However, water charges shall be levied as applicable.
3. There shall be no obligation of any free power or contribution towards Local Area Development Fund (LADF).
4. Developer may avail budgetary support towards cost of enabling infrastructure from Ministry of Power as per the Office Memorandum dated 28-09-2021 of MoP or any revisions thereof or any other Govt. of India scheme as applicable, as per eligibility.

With regard to incentives applicable upon consumption of energy from PSPs, it is clarified that :—

Consumption of energy from PSPs developed under this policy will be eligible for all incentives that are applicable to the consumption of energy from RE projects under OREP-22 provided that the input energy is procured from RE projects developed under the OREP-22 (i.e. if the input energy source solar, wind etc. project is located inside Odisha). While sourcing of input energy from sources inside State is incentivised, there shall be no dis-incentive, on sourcing input energy from outside.

While there is universal acceptance about the role of PSPs in energy transition, the high cost of power generated from PSP has kept it away from universal adoption. Power from PSP is costly due to involvement of input energy and cost of development of projects. To reduce the cost and improve acceptance, the State Government may come up with a VGF scheme which will be applicable to such projects or such energy which is procured for use by GRIDCO for DISCOMs. However, no VGF from the State Government shall be made available to projects set up for captive consumption/ third party sale. PSPs availing incentives under the IPR are not eligible for any incentive under this policy and OREP-22 and *vice versa*.

8. Mode of Operation :

All projects are to be developed in Build-Own-Operate-Transfer (BOOT) model. The concession period shall be 40 years and may be extended by up to 30 more years in line with the prevailing rules and regulations and with approval of the State Government. At the end of the Concession Period, the projects shall be transferred to the State Govenment, free from any encumbrances. In case of PSP projects developed for captive consumption, transfer clause shall not be applicable till the period the PSP maintains CGP status.

9. Progress of development and Transfer :

Strict action shall be taken in cases where the developer who has been allotted a PSP site is found to be squatting and does not show any substantial progress on ground within a period of two years from registration or two years from allotment. Apart from cancellation of registration/ allocation project site, encashment of Performance Guarantee, the State Government can blacklist the developers from future projects in the State. Transfer of ownership of the registered/allotted PSP site is not permissible till six months from commissioning of the project, unless otherwise approved by the State Government in exceptional circumstances.

10. Operational Guidelines :

The Department of Energy, Govt. of Odisha shall frame Rules and lay down detailed Operational Guidelines for implementation of the Odisha PSP Policy within fifteen (15) days of issuance of this Policy.

11. Policy Review, Removal of Difficulties and Interpretations :

The Government of Odisha through the Energy Department shall amend or review or relax or interpret any of the provisions of this policy as and when required. If any difficulty arises in giving effect to any provision of this Policy, Department of Energy shall issue clarifications and interpretations to such provisions of the Policy, as may appear to be necessary and expedient for removing the difficulties either on its own or after hearing those parties who have represented for change in any provision. The decision of the State Government shall be final. Restrospective amendments to the incentives available under this Policy shall be avoided.

ORDER—Ordered that this Resolution be published in an extraordinary issue of *Odisha Gazette*.

By order of the Governor
VISHAL KUMAR DEV
Principal Secretary to Government

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